

We claim:

1. An image projection system, comprising:

a first optical projector operable to project a first portion of an image in a first  
5 color in response to a first optical signal;

a second optical projector operable to project a second portion of the image in a  
second color in response to a second optical signal; and

an image generator operable to respectively generate the first and second optical  
signals.

10 2. The image projection system of claim 1 wherein:

the first optical projector includes regions having adjustable luminance levels;

the second optical projector includes regions having adjustable luminance levels;

15 the first portion of the image includes sections having respective luminance  
levels;

the second portion of the image includes sections having respective luminance  
levels;

20 the first optical signal is operable to set the luminance levels of the regions of the  
first optical projector in relation to the luminance levels of the corresponding sections of  
the first portion of the image; and

the second optical signal is operable to set the luminance levels of the regions of  
the second optical projector in relation to the luminance levels of the corresponding  
sections of the second portion of the image.

25 3. The image projection system of claim 1 wherein:

the first optical projector includes regions having adjustable luminance levels;

the second optical projector includes regions having adjustable luminance levels;

the first portion of the image includes sections having respective luminance  
levels;

the second portion of the image includes sections having respective luminance levels; and

the image generator is operable to generate third and fourth optical signals and is operable to generate the first and second portions of the image by directing the first and third optical signals and the second and fourth optical signals onto the first and second optical projectors, respectively, the third optical signal operable to set the luminance levels of the regions of the first optical projector to a first predetermined level, the fourth optical signal operable to set the luminance levels of the regions of the second optical projector to a second predetermined level, the first optical signal operable to set the luminance levels of the regions of the first optical projector in relation to the luminance levels of the corresponding sections of the first portion of the image, and the second optical signal operable to set the luminance levels of the regions of the second optical projector in relation to the luminance levels of the corresponding sections of the second portion of the image.

4. The image projection system of claim 1, further comprising:  
a display screen operable to display the image;  
wherein the first optical projector is operable to project the first portion of the image onto the display screen; and  
wherein the second optical projector is operable to project the second portion of the image onto the display screen.

5. The image projection system of claim 1 wherein the first and second optical projectors are coplanar.

6. The image projection system of claim 1, further comprising:  
a third optical projector operable to project a third portion of the image in a third color in response to a third optical signal; and  
wherein the image generator is operable to generate the third optical signal.

7. An image projection system, comprising:  
a first projection screen operable to project a first portion of an image in a first color;  
a second projection screen operable to project a second portion of the image in a  
5 second color; and  
an image generator operable to respectively generate the first and second portions of the image on the first and second projection screens.

8. The image projection system of claim 7 wherein:  
10 the first projection screen includes regions having adjustable luminance levels;  
the second projection screen includes regions having adjustable luminance levels;  
the first portion of the image includes sections having respective luminance levels;  
15 the second portion of the image includes sections having respective luminance levels; and  
the image generator is operable to generate the first and second portions of the image by directing first and second electromagnetic image beams onto the first and second projection screens, respectively, the first image beam operable to set the  
20 luminance levels of the regions of the first projection screen in relation to the luminance levels of the corresponding sections of the first portion of the image, the second image beam operable to set the luminance levels of the regions of the second projection screen in relation to the luminance levels of the corresponding sections of the second portion of the image.

9. The image projection system of claim 7 wherein:  
the first projection screen includes regions having adjustable luminance levels;  
the second projection screen includes regions having adjustable luminance  
25 levels;

the first portion of the image includes sections having respective luminance levels;

the second portion of the image includes sections having respective luminance levels; and

5 the image generator is operable to generate the first and second portions of the image by directing first and second electromagnetic erase beams and first and second electromagnetic image beams onto the first and second projection screens, respectively, the first erase beam operable to set the luminance levels of the regions of the first projection screen to a first predetermine level, the second erase beam operable  
10 to set the luminance levels of the regions of the second projection screen to a second predetermined level, the first image beam operable to set the luminance levels of the regions of the first projection screen in relation to the luminance levels of the corresponding sections of the first portion of the image, and the second image beam operable to set the luminance levels of the regions of the second projection screen in  
15 relation to the luminance levels of the corresponding sections of the second portion of the image.

10. The image projection system of claim 7, further comprising an illuminator operable to illuminate the first and second projection screens.

11. The image projection system of claim 7, further comprising:  
a first illuminator operable to illuminate the first projection screen; and  
a second illuminator operable to illuminate the second projection screen.

12. The projection system of claim 7, further comprising:  
a first illuminator operable to illuminate the first projection screen with light having the first color; and  
a second illuminator operable to illuminate the second projection screen with light having the second color.

13. The projection system of claim 7, further comprising:  
a display screen operable to display the image;  
wherein the first projection screen is operable to project the first portion of the  
image onto the display screen; and  
5 wherein the second projection screen is operable to project the second portion of  
the image onto the display screen.

14. The projection system of claim 7, further comprising:  
a display screen operable to display the image; and  
10 an optical assembly disposed between the display screen and the first and  
second projection screens and operable to direct the first and second portions of the  
image from the first and second projection screens onto the display screen.

15. The projection system of claim 7, further comprising:  
15 a display screen operable to display the image;  
a first optical element disposed between the display screen and the first  
projection screen and operable to direct the first portion of the image from the first  
projection screen onto the display screen; and  
a second optical element disposed between the display screen and the second  
20 projection screen and operable to direct the second portion of the image from the  
second projection screen onto the display screen.

16. The projection system of claim 7 wherein the first and second projection  
screens are coplanar.

17. The projection system of claim 7 wherein the first and second projection  
screens each compose an integral portion of a single member.

18. The projection system of claim 7, further comprising:  
a third projection screen operable to project a third portion of the image in a third color; and

5 wherein the image generator is operable to generate the third portion of the image on the third projection screen.

19. The projection system of claim 7, further comprising:  
a third projection screen operable to project a third portion of the image in a third color;

10 wherein the image generator is operable to generate the third portion of the image on the third projection screen; and

wherein, the first, second, and third colors are red, green, and blue, respectively.

20. A method, comprising:

15 generating a first portion of an image on a first section of a projection screen, the first portion representing a first color;

generating a second portion of the image on a second section of the projection screen, the second portion representing a second color; and

20 projecting the first and second portions of the image from the first and second sections of the projection screen in the first and second colors, respectively.

21. An image projection system, comprising:

a first image amplifier operable to project a first portion of an image in a first color in response to a first electromagnetic beam;

25 a second image amplifier operable to project a second portion of the image in a second color in response to a second electromagnetic beam; and

an image generator operable to scan the first and second electromagnetic beams onto the first and second image amplifiers, respectively.

22. The image projection system of claim 21 wherein the first and second electromagnetic beams respectively comprise first and second optical beams.

23. The image projection system of claim 21, further comprising:  
5 a third image amplifier operable to project a third portion of the image in a third color in response to a third electromagnetic beam; and  
wherein the image generator is operable to scan the third electromagnetic beam onto the third image amplifier.

10 24. The method of claim 20, wherein:  
generating the first portion of the image comprises directing a first image beam onto the first section of the projection screen to set the luminance levels of regions of the first section in relation to the luminance levels of corresponding sections of the first portion of the image; and

15 generating the second portion of the image comprises directing a second image beam onto the second section of the projection screen to set the luminance levels of regions of the second section in relation to the luminance levels of corresponding sections of the second portion of the image.

20 25. The method of claim 20, wherein:  
generating the first portion of the image comprises,  
directing a first erase beam onto the first section of the projection screen to set the luminance levels of regions of the first section to a first predetermined luminance level, and  
25 directing a first image beam onto the first section to set the luminance levels of the regions of the first section in relation to the luminance levels of corresponding sections of the first portion of the image; and  
generating the second portion of the image comprises,

directing a second erase beam onto the second section of the projection screen  
to set the luminance levels of regions of the second section to a second  
predetermined luminance level, and

5 directing a second image beam onto the second section to set the luminance  
levels of the regions of the second section in relation to the luminance  
levels of corresponding sections of the second portion of the image.

26. The method of claim 20, further comprising:

10 illuminating the first section of the projection screen with electromagnetic energy  
having the first color; and  
illuminating the second section of the projection screen with electromagnetic  
energy having the second color.

15 27. The method of claim 20, further comprising illuminating the first and  
section sections of the projection screen.

20 28. The method of claim 20, further comprising generating the image on a  
display screen by projecting the first and second portions of the image onto the display  
screen such that the first portion is aligned with the second portion on the display  
screen.

29. The method of claim 20, further comprising:

25 projecting the first and second portions of the image from the first and second  
sections, respectively, of the projection screen;  
optically altering the projected first and second portions of the image;  
projecting the altered first and second portions of the image onto a display  
screen.



30. The method of claim 20, further comprising:  
generating a third portion of the image on a third section of the projection screen,  
the third portion representing a third color; and  
projecting the third portion of the image from the third section of the projection  
5 screen in the third color.